Patent Abstracts of Japan

PUBLICATION NUMBER : 05251333
PUBLICATION DATE : 28-09-93

APPLICATION DATE : 06-03-92
APPLICATION NUMBER : 04049148

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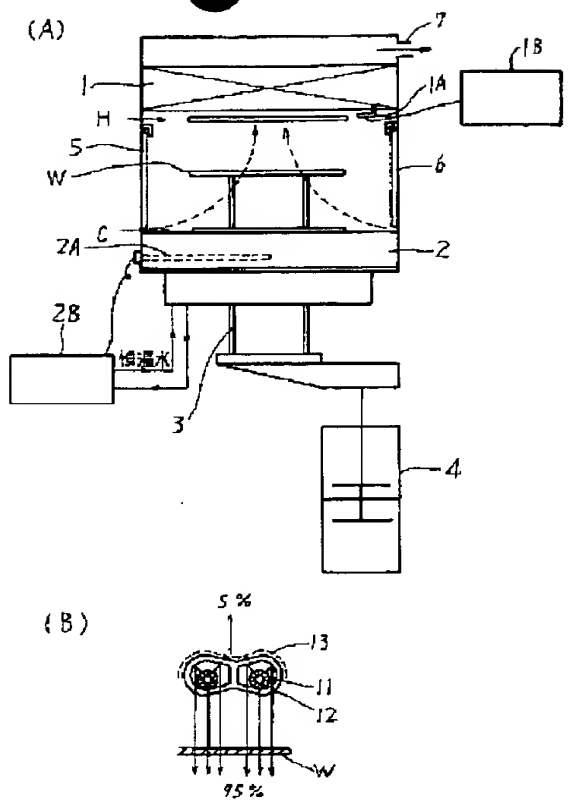
INT.CL. : H01L 21/027

TITLE : SEMICONDUCTOR MANUFACTURING APPARATUS AND TREATMENT METHOD



ABSTRACT : PURPOSE: To restrain an irregularity in the treatment time of the title manufacturing apparatus and to enhance the accuracy of the line width of a resist pattern regarding the baking (PEB) treatment, of a resist, which is executed after an exposure operation.

CONSTITUTION: (1) The title manufacturing apparatus is provided with the following: a heating part 1 installed on the upper side of a wafer to be treated; a cooling part 2 installed on the lower side of the wafer to be treated; and wafer movement mechanisms 3, 4 by means of which the wafer can be moved up and down between the heating part and the cooling part and which can stop and hold the wafer in a heating position and a cooling position. (2) A medium-wavelength infrared heater in which the peak of an energy distribution is a wavelength λ= 2.5 to 3.5μm is user for the heating part 1. (3) The wafer to be treated is constituted so as to be moved to the cooling part 2 in the half-way part of a temperature rise process in which the wafer to be treated in the heating position reaches the temperature of the heating part 1.